The Soil Conservation Service operates and maintains one of its 23 plant materials centers at Aberdeen, Idaho. Special emphasis is placed on finding suitable plants for erosion control on soils and sites where it is difficult to establish protective vegetative cover.

Plant materials are a significant component of about two-thirds of the conservation practices farmers, ranchers and other find essential to the solution of erosion and sedimentation problems. It is SCS policy to assemble, evaluate, relase and distribute for commercial increase, new or improved plant materials needed for resource conservation and development.

United States Department of Agriculture
Soil Conservation Service
Salt Lake City, Utah

Ephraim Crested Wheatgrass

May 1983

Ephraim Crested Wheatgrass

Ephraim was selected for its ability to produce rhizomes as opposed to other crested wheatgrasses that are bunchgrasses. Ephraim has 2n=28 chromosomes. Leaf height and forage production is comparable to Fairway crested wheatgrass. Culm length is slightly shorter.

Ephraim was released by the USDA Forest Service Intermountain Forest and Range Experiment Station, Soil Conservation Service, Utah State Division of Wildlife Resources and Agricultural Experiment Stations of the Universities of Idaho, Utah State, and Arizona in 1982.

Adaptability

Ephraim crested wheatgrass is a persistent sod-forming grass adapted to arid ranges of the Intermountain West. On range sites, rhizome development is dependent on site conditions; the more harsh the site, the slower rhizomes develop. On most pinyon-juniper and sagebrush-grass sites, rhizomes will develop by the third year.

Ephraim will grow and produce adequate forage with 8 inches annual precipitation. It does best between 10 and 14 inches annual precipitation. It is adapted to a wide range of soils including disturbed areas and mine spoils. Salt and alkali tolerance is moderately high.

Ephraim is susceptible to black grass bug, *Lubops hesperus*, when in pure stands. A severe infestation may destroy the entire seed crop.

Ephraim is rhizomatous and has shown good characteristics for stabilization of disturbed sites, critical areas, and erosion control. Equal to Fairway crested wheatgrass for range forage, it greens up in the spring and fall and matures similarly to Fairway.

Seeding Recommendations

A clean, firm, weed-free seedbed is recommended. Dryland seeding should be made in the late fall or very early spring.

For range and critical area treatment, a seeding rate of seven to nine pounds Pure Live Seed (PLS) per acre with a range drill at not more than one-half inch depth is adequate. Adjustments in seeding rate should be made when in mixtures.

When seeding for seed increase, it should be done in rows 28 to 40 inches apart. Seed at three pounds per acre of pure live seed.

At 100% purity, there are about 200,000 seeds per pound. Germination of seed has averaged better than 90%.

Management

Do not graze until late summer or fall of the second growing season. Use no more than 60% of the annual growth during the winter season or 50% during the growing season. Periodically, the grass should be allowed to mature and produce seed.

Seed Availability

Breeders and foundation seed are maintained by the Plant Materials Center at Aberdeen, Idaho. Foundation seed may be obtained through Soil Conservation Districts, University Agricultural Experiment Stations, and Crop Improvement Associations.